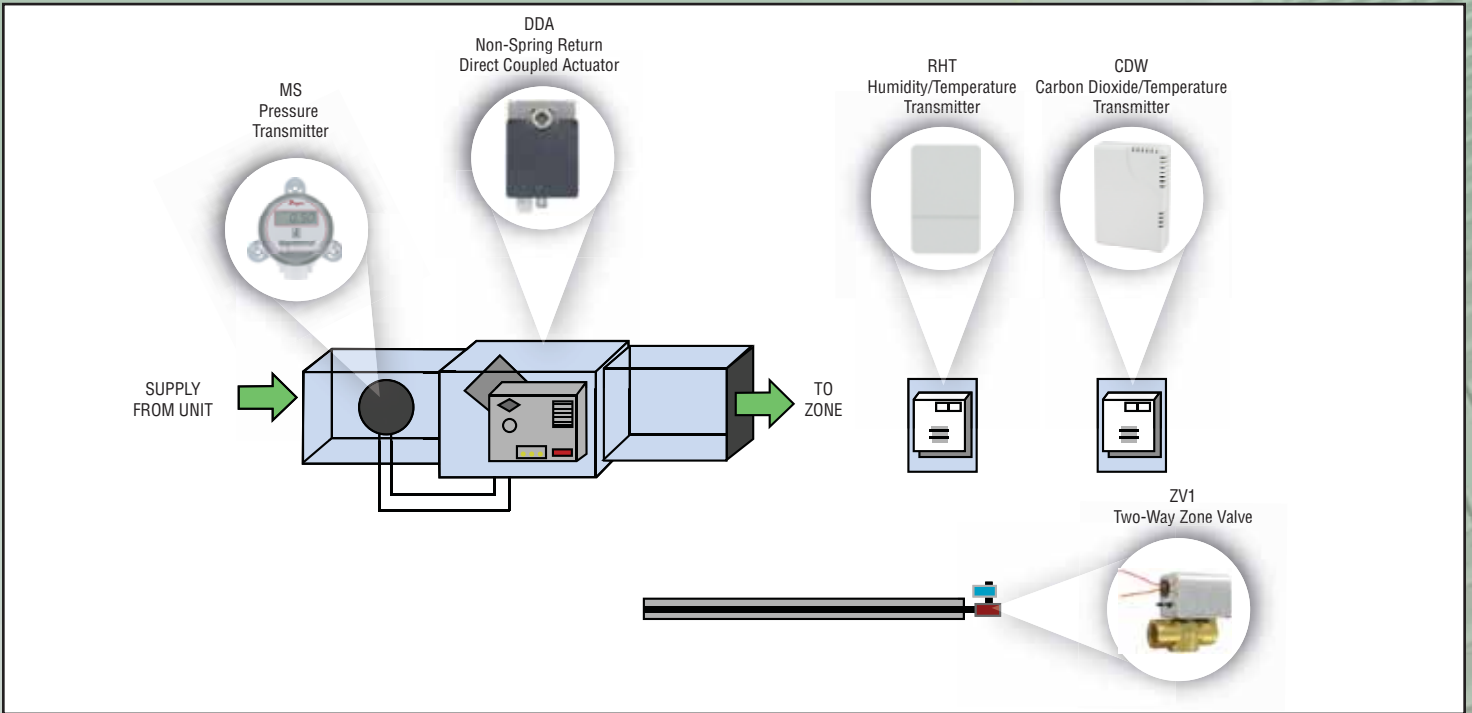


Building Automation

Room Control Example

Buildings are often broken down into zones for better control of the HVAC system. These zones can have Variable Air Volume (VAV) systems with a VAV terminal unit or VAV “box”. A VAV box controls the air flow into the zone thereby controlling the environment of the zone.



AIR VOLUME CONTROL

The amount of air added to the zone is controlled by opening and closing the air duct via a damper with a damper actuator.

- Product used: DD Damper Actuator.



ROOM TEMPERATURE AND CARBON DIOXIDE

The amount of air flow to a zone is varied based on occupancy in a zone. The occupancy is determined by the concentration of carbon dioxide in the zone.

- Product used: CDW Carbon Dioxide and Temperature Transmitter



ROOM TEMPERATURE AND HUMIDITY

A wall mounted temperature and humidity transmitter is placed in the zone to monitor the zone conditions and determine demand.

- Product used: RHT-W Humidity and Temperature Transmitter.



DUCT AIR FLOW

The amount of air flow to the zone is changed according to the demand. An air velocity transmitter is used to monitor the duct air flow.

- Product used: MS Pressure Transmitter that has square root extraction for air velocity.



WATER FLOW CONTROL

VAV systems can include heating coils of hot water that the air flows past. A zone valve is used to change the amount of hot water added to the heating coil. Zone systems can include radiant heating systems. A zone valve is used to change the amount of hot water added to the radiator in the zone.

- Products used: ZV1 Zone Valves.

